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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/725,494

12/03/2003

Chandra Mouli

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3984

24998

7590

06/14/2006

DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP

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Washington, DC 20037

EXAMINER

LEE, PATRICK J

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/725,494	MOULI, CHANDRA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Patrick J. Lee	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-93 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. This action is in response to amendment filed May 1, 2006.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,547,074 to Hinoda et al in view of US 6,285,020 B1 to Kim et al.

With respect to claim 1, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1); dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the photoconversion device for passing light of a specific wavelength to photoconversion device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular

wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest (see column 3, lines 17-30). Such would comprise the mesh optical filter positioned over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while lowering the number of components, allowing for ease of manufacture and lower cost of production.

With respect to claim 2, the modified Hinoda et al disclose the use of apertures (12, 106, 124).

With respect to claims 3-4, the modified Hinoda et al does not explicitly state the use of a CMOS or CCD image sensor, but such would have been obvious to one of ordinary skill in the art because of the ability to capture images accurately while providing for low manufacturing cost.

With respect to claim 5, the modified Hinoda et al discloses the vacuum evaporation as a method for depositing the metal layer.

With respect to claims 6-7, the metal layers are not disclosed to have the thicknesses claimed, but such would have been obvious to one of ordinary skill in the art in order to give the metal layers the transmissivity possible to allow a certain wavelength to pass through.

With respect to claim 8, the modified Hinoda et al discloses the use of silver or aluminum for the metal films (see column 3, lines 26-27).

With respect to claim 9, the modified Hinoda et al illustrate apertures (12, 106, 124) to be circular.

With respect to claims 10-11 & 13-16, the modified Hinoda et al does not explicitly disclose the apertures as such shape and size, but such would have been obvious to one of ordinary skill in the art because such would allow for a specific transmissivity of light.

With respect to claim 12, the modified Hinoda et al discloses the transmission of peak wavelengths in the visible spectrum (see column 4, lines 31-36).

With respect to claims 17-19, the modified Hinoda et al does not explicitly disclose the passing of non-visible light, infrared light, or near-infrared light, but such would have been obvious to one of ordinary skill in the art because one of ordinary skill in the art would be able to adjust the thicknesses of the films and dielectric layers in order to adjust the peak wavelength transmitted.

With respect to claim 20, the modified Hinoda et al disclose the filter made of silver or aluminum (see column 3, lines 26-27).

With respect to claim 21, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1); dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the photoconversion device for passing light of a specific wavelength to photoconversion device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as

controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest (see column 3, lines 17-30). Such would comprise the mesh optical filter positioned over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while lowering the number of components, allowing for ease of manufacture and lower cost of production. Hinoda et al does not disclose the use of an additional mesh optical filter positioned over the first mesh optical filter, but such would have been obvious to one of ordinary skill in the art as an obvious duplication of parts as such would increase the ability of the device to filter out radiation.

With respect to claim 22, Hinoda et al does not explicitly disclose apertures, but such would be obvious to one of ordinary skill in the art in order to give the metallic layers (36, 37) the ability to pass light through.

With respect to claim 23, the modified Hinoda et al discloses the vacuum evaporation as a method for depositing the metal layer.

With respect to claim 24, the metal layers are not disclosed to have the thicknesses claimed, but such would have been obvious to one of ordinary skill in the art in order to give the metal layers the transmissivity possible to allow a certain wavelength to pass through.

With respect to claim 25, the modified Hinoda et al disclose the metal layer to be made of silver or aluminum (see column 3, lines 26-27).

With respect to claim 26, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1); dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the photoconversion device for passing light of a specific wavelength to photoconversion device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest (see column 3, lines 17-30). Such would comprise the mesh optical filter positioned

over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while lowering the number of components, allowing for ease of manufacture and lower cost of production. Hinoda et al does not disclose the use of an additional mesh optical filter positioned over the first mesh optical filter, but such would have been obvious to one of ordinary skill in the art as an obvious duplication of parts as such would increase the ability of the device to filter out radiation.

With respect to claim 27, the modified Hinoda et al disclose the transmission band of 440, 445 nm, which would fall in the passage of blue light.

With respect to claim 28, the modified Hinoda et al does not disclose the wavelength transmitted to be in the cyan, magenta, or yellow light region, but such would have been obvious to one of ordinary skill in the art because such would allow for imaging with that specific wavelength.

With respect to claim 29, the use of a Bayer pattern is not explicitly disclosed, but such would have been obvious to one of ordinary skill in the art because such would allow for randomization of different color filters.

With respect to claim 30, the modified Hinoda et al disclose the filter made of silver or aluminum (see column 3, lines 26-27).

With respect to claims 31 & 34, the modified Hinoda et al discloses the vacuum evaporation as a method for depositing the metal layer.



With respect to claims 32-33, the metal layers are not disclosed to have the thicknesses claimed, but such would have been obvious to one of ordinary skill in the art in order to give the metal layers the transmissivity possible to allow a certain wavelength to pass through.

With respect to claims 35-36, the modified Hinoda et al does not explicitly state the use of a CMOS or CCD image sensor, but such would have been obvious to one of ordinary skill in the art because of the ability to capture images accurately while providing for low manufacturing cost.

With respect to claim 37, the modified Hinoda et al does not explicitly disclose apertures, but such would be obvious to one of ordinary skill in the art in order to give the metallic layers (36, 37) the ability to pass light through.

With respect to claim 38, the modified Hinoda et al illustrate apertures (12, 106, 124) to be circular.

With respect to claims 39-44, the modified Hinoda et al does not explicitly disclose the apertures as such, but such would have been obvious to one of ordinary skill in the art because such would allow for a specific transmissivity of light.

With respect to claim 45, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1); dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the photoconversion device for passing light of a specific wavelength to photoconversion

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device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest (see column 3, lines 17-30). Such would comprise the mesh optical filter positioned over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while lowering the number of components, allowing for ease of manufacture and lower cost of production. Hinoda et al does not disclose the use of an additional mesh optical filter positioned over the first mesh optical filter, but such would have been obvious to one of ordinary skill in the art as an obvious duplication of parts as such would increase the ability of the device to filter out radiation.

With respect to claim 46, the modified Hinoda et al disclose the transmission band of 440, 445 nm, which would fall in the passage of blue light.

With respect to claim 47, the modified Hinoda et al does not disclose the wavelength transmitted to be in the cyan, magenta, or yellow light region, but such

would have been obvious to one of ordinary skill in the art because such would allow for imaging with that specific wavelength.

With respect to claim 48, the use of a Bayer pattern is not explicitly disclosed, but such would have been obvious to one of ordinary skill in the art because such would allow for randomization of different color filters.

With respect to claim 49, the modified Hinoda et al disclose the filter made of silver or aluminum (see column 3, lines 26-27).

With respect to claims 50 & 53, the modified Hinoda et al discloses the vacuum evaporation as a method for depositing the metal layer.

With respect to claims 51-52, the metal layers are not disclosed to have the thicknesses claimed, but such would have been obvious to one of ordinary skill in the art in order to give the metal layers the transmissivity possible to allow a certain wavelength to pass through.

With respect to claims 54-55, the modified Hinoda et al does not explicitly state the use of a CMOS or CCD image sensor, but such would have been obvious to one of ordinary skill in the art because of the ability to capture images accurately while providing for low manufacturing cost.

With respect to claim 56, the modified Hinoda et al illustrates the use of apertures (12, 106, 124).

With respect to claim 57, the modified Hinoda et al illustrates apertures (12, 106, 124) to be circular.

With respect to claims 58-63, the modified Hinoda et al does not explicitly disclose the apertures as such, but such would have been obvious to one of ordinary skill in the art because such would allow for a specific transmissivity of light.

With respect to claim 64, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1); dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the photoconversion device for passing light of a specific wavelength to photoconversion device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest (see column 3, lines 17-30). Such would comprise the mesh optical filter positioned over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while

lowering the number of components, allowing for ease of manufacture and lower cost of production.

With respect to claim 65, the modified Hinoda et al illustrates the use of apertures (12, 106, 124).

With respect to claim 66, the modified Hinoda et al illustrate the use of metal layer over substrate.

With respect to claims 67-68, the metal layers are not disclosed to have the thicknesses claimed, but such would have been obvious to one of ordinary skill in the art in order to give the metal layers the transmissivity possible to allow a certain wavelength to pass through.

With respect to claim 69, the modified Hinoda et al disclose the filter made of silver or aluminum (see column 3, lines 26-27).

With respect to claim 70, the modified Hinoda et al illustrates apertures (12, 106, 124) to be circular.

With respect to claims 71-77, the modified Hinoda et al does not explicitly disclose the apertures as such, but such would have been obvious to one of ordinary skill in the art because such would allow for a specific transmissivity of light.

With respect to claim 78, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1); dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the

photoconversion device for passing light of a specific wavelength to photoconversion device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest (see column 3, lines 17-30). Such would comprise the mesh optical filter positioned over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while lowering the number of components, allowing for ease of manufacture and lower cost of production. Hinoda et al does not disclose the use of an additional mesh optical filter positioned over the first mesh optical filter, but such would have been obvious to one of ordinary skill in the art as an obvious duplication of parts as such would increase the ability of the device to filter out radiation.

With respect to claim 79, the modified Hinoda et al disclose the transmission band of 440, 445 nm, which would fall in the passage of blue light.

With respect to claim 80, the modified Hinoda et al does not disclose the wavelength transmitted to be in the cyan, magenta, or yellow light region, but such would have been obvious to one of ordinary skill in the art because such would allow for imaging with that specific wavelength.

With respect to claim 81, the use of a Bayer pattern is not explicitly disclosed, but such would have been obvious to one of ordinary skill in the art because such would allow for randomization of different color filters.

With respect to claim 82, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1); dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the photoconversion device for passing light of a specific wavelength to photoconversion device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest

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(see column 3, lines 17-30). Such would comprise the mesh optical filter positioned over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while lowering the number of components, allowing for ease of manufacture and lower cost of production.

With respect to claim 83, the modified Hinoda et al disclose the use of apertures (12, 106, 124).

With respect to claim 84, the metal film (10) is disclosed to be a metal layer deposited and patterned to interconnect image sensor circuitry.

With respect to claims 85-86, the metal layers are not disclosed to have the thicknesses claimed, but such would have been obvious to one of ordinary skill in the art in order to give the metal layers the transmissivity possible to allow a certain wavelength to pass through.

With respect to claim 87, the modified Hinoda et al illustrates apertures (12, 106, 124) to be circular.

With respect to claims 88-89, the modified Hinoda et al does not explicitly disclose the apertures as such, but such would have been obvious to one of ordinary skill in the art because such would allow for a specific transmissivity of light.

With respect to claim 90, Hinoda et al disclose a color sensing device comprising: substrate (1) as a semiconductor substrate (see column 3, lines 2-4); photodiodes (11, 12) as a photoconversion device formed within the substrate (1);



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dielectric layer (35) formed over photoconversion device (11, 12); and interference filters (31-34) comprising metal films (36-37) as a mesh optical filter positioned over the photoconversion device for passing light of a specific wavelength to photoconversion device (11, 12). Hinoda et al disclose the thicknesses of metal films (36-37) as controlling the transmission of a specific wavelength (see column 4, lines 26-38). Applicant argues in the response that use of colored filters (42-44) distinguishes Hinoda et al from the mesh optical filter claimed. However, the claim does not expressly exclude any use of colored filters, so it will be interpreted that applicant is basing the distinction from the device of Hinoda et al on the fact that Hinoda et al passes a range of wavelengths and not a specific singular wavelength. In that sense, Kim et al disclose such through the use of an optical transmission apparatus comprising a metal film (10, 104, 120) with apertures (12, 106, 124) for passing a particular wavelength of interest (see column 3, lines 17-30). Such would comprise the mesh optical filter positioned over the device for passing a specific wavelength of light. It would be obvious to one of ordinary skill in the art to modify the teachings of Hinoda et al with those of Kim et al because such would improve the filtering ability of the device of Hinoda et al while lowering the number of components, allowing for ease of manufacture and lower cost of production.

With respect to claim 91, the metal film (10) is disclosed to be a metal layer deposited and patterned to interconnect image sensor circuitry.

With respect to claim 92, the metal layers are not disclosed to have the thicknesses claimed, but such would have been obvious to one of ordinary skill in the

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art in order to give the metal layers the transmissivity possible to allow a certain wavelength to pass through.

With respect to claim 93, the modified Hinoda et al disclose the metal layer to be made of silver or aluminum (see column 3, lines 26-27).


***Response to Arguments***

4. Applicant's arguments with respect to claims 1-93 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (571) 272-2440. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

  
**Stephone B. Allen**  
**Primary Examiner**

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Patrick J. Lee  
Examiner  
Art Unit 2878

PJL  
June 8, 2006